**PRACTICAL NO :04**

**PROGRAM:**

def selection\_sort(marks):

for i in range(len(marks)):

min=i

for j in range(i+1,len(marks)):

if marks[min]>marks[j]:

min=j

marks[i],marks[min]=marks[min],marks[i]

print("marks of students after performing selection sort on the list:")

for i in range(len(marks)):

print(marks[i])

#function for bubbel sorting

def bubble\_sort(marks):

n=len(marks)

for i in range(n-1):

for j in range(0,n-1-i):

if marks[j]>marks[j+1]:

marks[j],marks[j+1]=marks[j+1],marks[j]

print("marks of students after performing bubble sort on the list:")

for i in range(len(marks)):

print(marks[i])

def top\_five\_marks(marks):

print("top",len(marks),"marks are")

print(\*marks[::-1],sep="\n")

marks=[]

n=int(input("enter number of student whose marks are to be displayed:"))

print("enter marks for",n,"students :")

for i in range(0,n):

ele=float(input())

marks.append(ele)

print("the marks of",n,"students are:")

print(marks)

flag=1;

while flag==1:

print("\n\n-----------------MENU---------------\n")

print("1.selection sort")

print("2.bubble sort")

print("3.EXIT")

ch=int(input("enter your choice"))

if ch==1:

selection\_sort(marks)

a=input("\nDo you want to display top marks from the list (yes/no) : ")

if a=='yes':

top\_five\_marks(marks)

else:

print("\nThanks for using this program!")

flag=0

elif ch==2:

bubble\_sort(marks)

a=input("\nDo you want to display top marks from the list (yes/no) : ")

if a=='yes':

top\_five\_marks(marks)

else:

print("\nThanks for using this program!")

flag=0

elif ch==3:

print("EXIT")

print("thanks for uisng this program")

else:

print("wrong choice")

a=input("\nDo you want to display top marks from the list (yes/no) : ")

if a=='yes':

top\_five\_marks(marks)

else:

print("\nThanks for using this program!")

flag=0

**OUTPUT**:

enter number of student whose marks are to be displayed:4

enter marks for 4 students :

98

65

74

21

the marks of 4 students are:

[98.0, 65.0, 74.0, 21.0]

-----------------MENU---------------

1.selection sort

2.bubble sort

3.EXIT

enter your choice1

marks of students after performing selection sort on the list:

21.0

65.0

74.0

98.0

Do you want to display top marks from the list (yes/no) : yes

top 4 marks are

98.0

74.0

65.0

21.0

-----------------MENU---------------

1.selection sort

2.bubble sort

3.EXIT

enter your choice2

marks of students after performing bubble sort on the list:

21.0

65.0

74.0

98.0

Do you want to display top marks from the list (yes/no) : yes

top 4 marks are

98.0

74.0

65.0

21.0

-----------------MENU---------------

1.selection sort

2.bubble sort

3.EXIT

enter your choice3

EXIT

thanks for uisng this program

-----------------MENU---------------

1.selection sort

2.bubble sort

3.EXIT

enter your choice4

wrong choice